

BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA
DOCKET NO. 2018-1-E - ORDER NO. 2018-456
JUNE 28, 2018

IN RE:	Annual Review of Base Rates for)	ORDER APPROVING AND
	Fuel Costs of Duke Energy Progress,)	ADOPTING ADJUSTMENT IN
	LLC)	FUEL COST RECOVERY
)	FACTORS

I. BACKGROUND

This matter comes before the Public Service Commission of South Carolina (“Commission”) on the annual review of base rates for fuel costs of Duke Energy Progress, LLC (“DEP” or “Company”). The procedure followed by the Commission is set forth in S.C. Code Ann. § 58-27-865 (2015), which provides for annual hearings to allow the Commission and all interested parties to review the prudence of the fuel purchasing practices and policies of an electrical utility and for the Commission to determine if any adjustment in a utility’s fuel cost recovery mechanism is necessary and reasonable. Additionally, pursuant to S.C. Code Ann. § 58-39-140 (2015), the Commission must determine in this proceeding whether an increase or decrease should be granted in the fuel cost component designed to recover the incremental or avoided costs incurred by the Company to implement the Distributed Energy Resource Program (“DERP”) previously approved by the Commission. The period under review in this Docket is March 1, 2017, through February 28, 2018 (“Review Period”).

A. Notice and Intervention

By letter dated December 14, 2017, the Clerk's Office of the Commission instructed the Company to publish a Notice of Hearing and Prefiled Testimony Deadlines ("Notice") in newspapers of general circulation and provide Proof of Publication on or before March 23, 2018. The letter also instructed the Company to furnish the Notice to each affected customer and provide a certification to the Commission on or before March 23, 2018, that notification had been furnished. The Notice indicated the nature of the proceeding and advised all interested parties desiring participation in the scheduled proceeding of the manner and time in which to file appropriate pleadings. On March 5, 2018, the Company filed with the Commission affidavits demonstrating that the Notice was duly published, and on March 12, 2018, the Company filed with the Commission a letter certifying that a copy of the Notice was furnished to the Company's retail customers in South Carolina with the instructions set forth in the Clerk's Office letters dated December 14, 2017.

Petitions to Intervene were received from Nucor Steel-South Carolina ("Nucor"), the South Carolina Coastal Conservation League ("CCL"), Southern Alliance for Clean Energy ("SACE"), South Carolina Solar Business Alliance, Incorporated ("SBA"), and Southern Current, LLC ("Southern"). The South Carolina Office of Regulatory Staff ("ORS") is automatically a party pursuant to S.C. Code Ann. § 58-4-10(B) (2015). In this Order, DEP, ORS, Nucor, CCL, SACE, SBA, and Southern are collectively referred to as the "Parties" or sometimes individually as a "Party."

There was no opposition to any of the Petitions to Intervene and the Commission issued orders granting each Petition to Intervene.¹

II. JURISDICTION OF THE COMMISSION

In accordance with S.C. Code Ann. § 58-27-140(1) (2015), the Commission may, upon petition, “ascertain and fix just and reasonable standards, classifications, regulations, practices or service to be furnished, imposed, observed, and followed by any or all electrical utilities.” Further, S.C. Code Ann. § 58-27-865(B) (2015) states, in pertinent part, that “[u]pon conducting public hearings in accordance with law, the commission shall direct each company to place in effect in its base rate an amount designed to recover, during the succeeding twelve months, the fuel costs determined by the commission to be appropriate for that period, adjusted for the over-recovery or under-recovery from the preceding twelve-month period.”

Consistent with the requirements of S.C. Code Ann. § 58-27-865(B), the Commission convened an evidentiary hearing to determine the reasonableness of the Company’s proposed increase in the base rate amount designed to recover fuel costs.

III. DISCUSSION OF THE HEARING AND CONCLUSIONS

The public evidentiary hearing in this matter was held on June 7, 2018, before this Commission with the Honorable Swain E. Whitfield presiding as Chairman. Representing the Parties and appearing before the Commission in this Docket were Rebecca J. Dulin, Esquire, and Frank R. Ellerbe, III, Esquire, for the Company; Michael K. Lavanga, Esquire, for Nucor; Lauren

¹ See Order No. 2018-242, granting the Petition to Intervene filed on behalf of Southern; Order No. 2018-241, granting the Petition to Intervene filed on behalf of SBA; Order No. 2018-240, granting the Petition to Intervene filed on behalf of CCL and SACE; Order No. 2018-239, granting the Petition to Intervene filed on behalf of Nucor.

Joy Bowen, Esquire, and Elizabeth Jones, Esquire, for SACE and CCL; and Andrew M. Bateman, Esquire, and Jenny R. Pittman, Esquire, for ORS.²

A. DEP Testimony

The Company presented the direct testimonies and exhibits of Bryan P. Walsh (substituted for and adopting the testimony of Joseph A. Miller, Jr.), Kelvin Henderson, Kevin Houston, Eric Grant, Kendra A. Ward, George Brown, and the rebuttal testimonies of Glen Snider and George Brown via three (3) panels.³ The pre-filed direct and rebuttal testimonies of all Company witnesses were accepted into the record without objection and the Company witnesses' exhibits were marked as composite Hearing Exhibits 1 through 7 and were entered into the record of the case.⁴

Company witness Walsh testified regarding DEP's fossil/hydro/solar generation portfolio and the changes made since the 2017 fuel cost recovery proceeding, as well as those expected in the near term; the performance of DEP's fossil/hydro/solar facilities during the Review Period; significant fossil/hydro outages that occurred during the Review Period; and the Company's environmental compliance efforts.

² Richard Whitt, Esquire, Representative for SBA and Southern, Timothy Rogers, Esquire, Representative for the SBA and Robert Smith, Esquire, Representative for Nucor Steel were granted permission from the Commission to be excused from attending the Hearing.

³ Prior to the hearing, and without objection from the Parties, the Commission granted DEP and ORS permission to utilize panels for the presentations of witnesses. DEP witnesses Bryan P. Walsh and Kelvin Henderson were presented in the first panel; witnesses Kevin Houston and Eric Grant were presented in the second panel; and witnesses Kendra Ward, George Brown and Glen Snider were presented in the third panel. ORS witnesses Anthony Briseno, Sarah Johnson and Willie J. Morgan were presented via a panel.

⁴ Composite Hearing Exhibit 1 consists of the two non-confidential Direct Testimony Exhibits 1 and 2 of Kelvin Henderson; Composite Hearing Exhibit 2 consists of the public and Confidential Direct Testimony Exhibit 3 of witness Henderson (the Confidential version to be maintained under seal); Composite Hearing Exhibit 3 consists of Direct Testimony Exhibits 1 and 2 of Kevin Houston; Composite Hearing Exhibit 4 consists of Direct Testimony Exhibits 1 and 2 of Eric Grant; Composite Hearing Exhibit 5 consists of Direct Testimony Exhibits 1-15 (Revised, as filed May 8, 2018) of Kendra Ward; Hearing Exhibit 6 consists of the Direct Testimony Exhibit as revised and filed on May 17, 2018 of George Brown; Hearing Exhibit 7 is Exhibit 1 to the Rebuttal Testimony of George Brown.

Company witness Henderson testified regarding the performance of Brunswick Nuclear Station, Shearon Harris Nuclear Station, and H.B. Robinson Nuclear Station during the Review Period.⁵ Witness Henderson reported to the Commission that DEP achieved a net nuclear capacity factor, excluding reasonable outage time, of 101.66% for the review period. This capacity factor is above the 92.5% set forth in S.C. Code § 58-27-865 (2015).

Company witness Houston testified regarding DEP's nuclear fuel purchasing practices and costs for the Review Period, and described related changes expected for the July 1, 2018, to June 30, 2019, billing period.

Company witness Grant testified regarding the Company's fossil fuel purchasing practices and costs for the Review Period, and described related changes expected for the July 1, 2018, to June 30, 2019, billing period.

Company witness Ward's direct testimony addressed the Company's actual costs related to fuel, capacity-related costs, environmental costs, and the Company's Distributed Energy Resource Program ("DERP") costs for the Review Period; the Company's projected fuel costs, capacity-related costs, environmental costs, and DERP costs for the forecast period of March 1, 2018, through June 30, 2018; and the Company's proposed fuel factors by customer class for the billing period of July 1, 2018, through June 30, 2019.

Witness Ward testified that the impact of the rates set forth in her direct testimony for an average residential customer using 1,000 kWh per month is an increase of \$3.24, or 2.7%; impacts

⁵ Pursuant to the Company's request, the Commission granted the Motion of DEP to treat specific material filed in the present proceeding as confidential. Specifically, in Order No. 2018-60-H, the Hearing Officer ordered that Exhibit 3 of DEP witness Henderson's testimony be treated as confidential.

for General Service (Non-Demand), Lighting, and General Service (Demand) vary by customer, but are increases of approximately 0.1%, 0.3%, and 2.0%, respectively.

On cross-examination by counsel for the ORS, Ward testified that DEP would agree to continue to make the reports as agreed to in Section B.16 of the Settlement Agreement in Docket No. 2017-1-E and incorporated in Order No. 2017-405(A).

Company witness Brown testified regarding DERP costs that are incorporated into the proposed fuel factors by witness Ward. Witness Brown also testified to the Company's calculation of the value of Net Energy Metering ("NEM") Distributed Energy Resources ("DER") and provided information on the Company's DERP activities since the 2017 fuel proceeding.

Company witness Brown also testified in response to the testimony of ORS witness Sarah Johnson, adopting witness Johnson's recommendations related to the calculation of the value of NEM DER and described the resulting updates to Rider RNM-6.

B. ORS Testimony

ORS presented the direct testimonies of Anthony D. Briseno, Sarah W. Johnson, and Willie J. Morgan via panel. The pre-filed direct testimony of all ORS witnesses was accepted into the record without objection or cross-examination by the Parties, and the ORS witnesses' exhibits were marked as composite Hearing Exhibits 11 through 13, and were entered into the record of the case.

ORS witness Briseno presented direct testimony and exhibits, which demonstrated the results of ORS Audit Staff's examination of DEP's books and records pertaining to DEP's

operations under the Fuel Adjustment Clause for the actual period of March 2017 through February 2018 and for the estimated months from March 2018 to June 2018.⁶

ORS witness Johnson presented direct testimony and two exhibits.⁷ Witness Johnson testified regarding the ORS's findings and examinations of the Company's DERP expenses, both actual and forecasted for the period of March 2017 through June 2018. Specifically, witness Johnson testified regarding the Company's DERP avoided and incremental costs and the method by which the Company proposed to recover those costs. Additionally, witness Johnson testified to the Company's calculation of the value of NEM DER, recommending a revision to the value set forth by Company witness Brown based upon an error discovered by the Company during the discovery process.

ORS witness Morgan presented direct testimony and exhibits.⁸ Witness Morgan testified regarding the Company's fuel expenses and power plant operations. Additionally, witness Morgan testified to ORS's examination of the Company's contracts for nuclear fuel, coal, natural gas, fuel oil, transportation and environmental reagents, as well as the Company's policies and procedures for fuel procurement.

C. SACE and CCL Testimony, Responsive Testimony, and Commission Conclusions

CCL and SACE presented the direct testimony and exhibits and surrebuttal testimony of Devi Glick. The pre-filed direct and surrebuttal testimonies of witness Glick were accepted into

⁶ Composite Hearing Exhibit 11 consists of the Direct Testimony Exhibits of Anthony Briseno (Exhibits 1-10).

⁷ Composite Hearing Exhibit 12 consists of the Direct Testimony Exhibits of Sarah Johnson (Exhibits 1-2).

⁸ Composite Hearing Exhibit 13 consists of the Direct Testimony Exhibits of Willie Morgan (Exhibits 1-10).

the record without objection and the exhibits were marked as composite Hearing Exhibit 9 and were entered into the record of the case.

The only contested issues in this proceeding were presented by witness Glick. Glick made recommendations regarding the value of NEM DER set forth in Company witness Brown's testimony. Each of these recommendations, DEP's response, and the Commission's conclusions regarding each recommendation are addressed as follows:

a. Witness Glick testified that, because it is possible to quantify avoided transmission and distribution costs, DEP should no longer use a placeholder value of zero for this category. Witness Glick referenced studies completed in other jurisdictions that assigned a value to avoided transmission and distribution capacity, and discussed potential approaches DEP could take to assign value to this component. Based on her analysis, witness Glick recommended that DEP adopt a value of \$0.005778 per kWh for avoided transmission capacity costs.

In rebuttal, witness Snider disagreed that DER permitted DEP to avoid transmission and distribution investments. Witness Snider testified that the Commission recently recognized in the SCE&G fuel proceeding (Docket No. 2017-2-E), that utilities "must design [their] transmission and distribution system so as to provide safe and reliable electric service, even when intermittent generation sources such as solar facilities and other small QFs are not producing power." Order No. 2017-246 at 24. Witness Snider further testified that, given the intermittency, lack of coincidence with peak demand, non-dispatchability, and uncertainty in NEM DER location and quantity, it is impossible for DER to avoid transmission and distribution investments, and it is, therefore, not appropriate to assign avoided transmission or distribution benefits to NEM DER. Witness Snider further testified that, with regard to distribution costs, NEM DER may actually

drive additional investments in the distribution system, as a result of increasing the size of service transformers to accommodate reverse flow, additional monitoring equipment, and updating voltage control schemes.

In surrebuttal, witness Glick testified that witness Snider did not specifically address witness Glick's recommendations as to avoided transmission capacity in his testimony. Witness Glick further testified that solar facilities can act as a larger generator with a smooth generation profile when they are aggregated.

Although witness Glick testified that it is possible to quantify avoided transmission and distribution costs, and therefore DEP should no longer use a placeholder value of zero for that category, the Commission agrees with witness Snider that solar resources' intermittency, non-dispatchability, and non-coincidence with peak demand preclude the Company from relying on these resources in avoiding transmission and distribution investments. As we have previously found, utilities must design their transmission and distribution systems so as to provide safe and reliable electric service, including when intermittent generation sources such as solar facilities are not producing power.

b. Witness Glick testified that, because it is possible to quantify the avoided environmental costs of coal ash disposal, DEP should no longer use a placeholder value of zero for this category. Witness Glick testified that there are many environmental costs that can be avoided through the decreased use of conventional combustion technologies such as coal, oil, and natural gas, and that coal ash disposal costs—to include variable operational costs, capital costs, and leak risk costs—should be included in the avoided environmental cost component.

In rebuttal, witness Snider testified that variable operational costs associated with coal ash disposal are already included within the avoided energy component of the calculation of NEM DER, that NEM DER will have no impact on the capital costs of coal ash impoundments as those impoundments have already been constructed, and that there is no leak risk given DEP's transition to dry handling. Witness Snider also noted that any avoided coal costs are minimal as NEM DER only reduces the amount of coal burned to the extent coal plants are operating on the margin.

In surrebuttal, witness Glick recommended that the Company separately state coal ash handling costs in the avoided environmental cost category of the value of NEM DER.

SACE and CCL have entered into a Memorandum of Understanding with DEP related to avoided environmental costs and discovery to be conducted in the 2018 Duke Energy Carolinas, LLC fuel cost proceeding.⁹ We accept SACE and CCL's late-filed exhibit. In the Memorandum of Understanding, SACE, CCL, and DEP agree to withhold any recommendations as to the calculation of avoided environmental costs related to coal ash until a future proceeding. Given this agreement, we decline to rule on these matters at this time.

c. Witness Glick further testified that an updated line loss study that calculates the distributed PV output-weighted marginal line loss based on the current footprint of DEP would improve the application of the methodology for calculating the value of NEM DER. In particular, witness Glick recommended that the line loss study be updated to reflect the joint DEP-DEC Carolinas system in order to quantify avoided energy, generating capacity, and transmission capacity costs associated with line losses. Witness Glick recommended that a marginal line loss methodology be used in updating the Company's line loss study, rather than average line losses,

⁹ Such Memorandum of Understanding was filed as late-filed Hearing Exhibit 10.

because line losses increase with the square of the current, and marginal losses capture the actual impact of adding another kW of solar to the distribution system.

In rebuttal, witness Snider testified that the line loss study the Company currently uses is representative of the Company's grid, and is therefore valid. Witness Snider testified that the inputs used to calculate the loss factors used in the NEM DER calculation are updated annually to reflect current system conditions. Witness Snider further testified that DEP is working toward updating its line loss study and adopting new modeling techniques that will refine those relied upon by the current line loss study, and that the Company anticipates that this study could be used in next year's fuel proceeding.

In surrebuttal, witness Glick again recommends that DEP use marginal losses rather than average losses, and that DEP use a solar photovoltaic profile rather than a fixed constant output to represent DEP's expected generator and transmission infrastructure.

The Commission finds that the Company's calculation of line losses is appropriate and that the Company properly applied line losses for both energy and capacity in a manner consistent with the methodology approved in Order No. 2015-194.

No other party filed testimony in this Docket.

IV. FINDINGS OF FACT AND OF CONCLUSIONS OF LAW

As reflected in the evidence of record, no party challenged the reasonableness or prudence of DEP's fuel purchasing practices and policies, plant operations, and fuel inventory management during the Review Period. Based upon the evidence and testimony of the witnesses, the Commission therefore finds and concludes that DEP's fuel purchasing practices and policies, plant operations, and fuel inventory management during the Review Period are consistent with the

statutory requirements of S.C. Code Ann. § 58-27-865 (2015), and are just, reasonable, and prudent.

The Commission finds that the methodology for determining the environmental cost component of the fuel factor and the methodology for allocation and recovery of the capacity-related cost component of the fuel factor (which includes purchased power capacity costs under the Public Utility Regulatory Policies Act of 1978 (“PURPA”) and natural gas transportation and storage costs) used by DEP in this proceeding are consistent with the statutory requirements of S.C. Code Ann. § 58-27-865 (2015), and are just, reasonable, and prudent.

As reflected in the evidence of record, no party challenged the reasonableness or prudence of DEP’s proposed fuel factor (including the components recovering fuel costs, variable environmental costs, capacity-related costs, and DERP costs). Based upon the evidence and testimony of the witnesses, the Commission therefore finds and concludes that DEP’s proposed fuel factor is consistent with the statutory requirements of S.C. Code Ann. § 58-27-865 (2015), and is just, reasonable and prudent.

The Commission finds that the 2018 component values for the NEM Distributed Energy Resource, as shown in Table 4 of witness Brown’s rebuttal testimony, comply with the NEM methodology approved by the Commission in Order No. 2015-194 and satisfy the requirements of S.C. Code Ann. § 58-40-10 *et seq.* (2015).

The Commission finds that the revisions to the 2018 Renewable Net Metering Rider RNM tariff sheet, as filed with witness Brown’s rebuttal testimony, are lawful, just and reasonable.

The DERP Charges as indicated in witness Ward’s corrected testimony are reasonable and comply with S.C. Code Ann. §§ 58-27-865, 58-39-140 and 58-39-150.

IT IS THEREFORE ORDERED THAT:

1. The pre-filed testimonies of ORS witnesses Anthony Briseno, Sarah W. Johnson and Willie J. Morgan; DEP witnesses Bryan P. Walsh, Kendra A. Ward, George V. Brown and Glen A. Snider; and CCL and SACE witness Devi Glick, along with their respective exhibits entered into evidence, are accepted into the record in the above-captioned case without objection. Also, Hearing Exhibit 8, the Settlement Agreement in Docket 2014-246-E is admitted, as is Hearing Exhibit 10, the late-filed copy of the Memorandum of Understanding among DEP, SACE and CCL. Lastly, the oral testimony of the above witnesses presented at the hearing on June 7, 2018 is also incorporated into the record of this case.

2. The fuel purchasing practices, plant operations, and fuel inventory management of DEP related to the historical fuel costs and revenues for the period ending February 28, 2018, are prudent.

3. The methodologies used by the Company for determining the environmental cost component and the capacity-related cost component of the fuel factor are reasonable and prudent for the review period and the billing period.

4. The Company's revisions to the 2018 Renewable Net Metering Rider RNM tariff sheet, attached hereto as Order Exhibit 1, are lawful, just and reasonable, and shall become effective for service rendered from July 1, 2018, through June 30, 2019.

5. The Company's calculation and method of accounting for the avoided and incremental costs for NEM during the Review Period were reasonable and prudent, and were consistent with the methodology approved in Commission Order 2015-194, and complied with S.C. Code Ann. § 58-40-10 *et seq.* (2015).

6. The 2018 component values for NEM Distributed Energy Resource comply with the NEM methodology approved by the Commission in Order No. 2015-194 and satisfy the requirements of S.C. Code Ann. § 58-40-10 *et seq.* (2015).

7. DEP shall set its base fuel factor (not including the applicable environmental cost component, capacity-related cost component, and DERP avoided cost component) at 2.384 cents per kWh for the Residential class, and 2.366 cents per kWh for General Service (non-demand and demand) and Lighting classes for service rendered July 1, 2018, through June 30, 2019.¹⁰

8. DEP shall set its environmental cost component billing factor at 0.019 cents per kWh for the Residential class, 0.008 cents per kWh for the General Service (non-demand) class, and 1.0 cent per kW for the General Service (demand) class, for service rendered July 1, 2018, through June 30, 2019.

9. DEP shall set its avoided capacity cost component at 0.681 cents per kWh for the Residential class, 0.426 cents per kWh for the General Service (non-demand) class, 0.00 cents per kWh for the Lighting class, and 88.0 cents per kW for the General Service (demand) class for service rendered July 1, 2018, through June 30, 2019.

10. DEP shall set its DERP Avoided Cost Component at 0.003 cents per kWh for the Residential class, 0.001 cents per kWh for the General Service (non-demand) class, and 0.00 cents per kW for the General Service (demand) and Lighting classes for service rendered July 1, 2018, through June 30, 2019.

¹⁰ The base fuel cost component, environmental cost component, capacity-related cost component, and DERP avoided cost component will be adjusted for billing purposes to include gross receipt tax and regulatory fees.

11. DEP shall set its DERP Charge at \$0.72 per month for the Residential class, \$1.27 per month for the Commercial class, and \$100.00 per month for the Industrial class, including Gross Receipts Tax.

12. DEP shall file the South Carolina Retail Adjustment for Fuel, Capacity-Related, Variable Environmental, and DERP Avoided Capacity Costs Rider; Renewable Net Metering Rider RNM-6 tariff sheet; and all other retail Tariffs with the Commission and a copy with ORS within ten (10) days of receipt of this Order . The revised tariffs should be electronically filed in a text searchable PDF format using the Commission's DMS System (<https://dms.psc.sc.gov/>). An additional copy should be sent via e-mail to etariff@psc.sc.gov to be included in the Commission's ETariff system (<https://etariff.psc.sc.gov>). DEP shall provide a reconciliation of each tariff rate change approved as a result of this order to each tariff rate revision filed in the ETariff system. Such reconciliation shall include an explanation of any differences and be submitted separately from the Company's ETariff filing. Each tariff sheet shall contain a reference to this Order and its effective date at the bottom of each page.

13. DEP shall comply with the notice requirements set forth in S.C. Code Ann. § 58-27-865. DEP shall utilize the methodology for developing the environmental component billing factor for each rate class to recover "variable environmental costs" under S.C. Code Ann. § 58-27-865(A)(1) established by the Settlement Agreement in Docket No. 2007-1-E and approved in Order No. 2007-440. Pursuant to S.C. Code Ann. § 58-27-865(A)(1), the avoided capacity component of purchased power costs and other capacity-related costs are to be allocated and recovered from customers under a separate capacity component of the overall fuel factor based on the same method that is used by the utility to allocate and recover variable environmental costs.

14. DEP shall continue to file the monthly reports as previously required. In an effort to keep the ORS and DEP's customers informed of the (over)/under recovery balances related to fuel costs and of DEP's commercially reasonable efforts to forecast the expected fuel factor to be set at its next annual fuel proceeding, DEP will provide to ORS, Nucor, and where applicable, its other customers the following information:

1. Copies of the monthly fuel recovery reports currently filed with the Commission and ORS¹¹; and,
2. Quarterly forecasts (during each of the three quarters in which there is no annual fuel proceeding but not in the quarter where DEP makes its annual fuel filing) of the expected fuel factor to be set at its next annual fuel proceeding based upon DEP's historical (over)/under recovery to date and DEP's forecast of prices for uranium, natural gas, coal, oil and other fuel required for generation of electricity. DEP agrees that it will put forth its best efforts to forecast the expected fuel factor to be set at its next annual proceeding. To the extent that the forecast data required hereunder is confidential, any party or customer that wants forecasted fuel data will have to sign a non-disclosure agreement to protect the data from public disclosure and to only disclose it to employees or agents with a need to be aware of this information.

¹¹ The Company agrees to break-out Schedule 4 of the monthly fuel recovery reports so that each component (base fuel, environmental, avoided capacity, and DER avoided costs) is reported separately.

15. DEP shall continue to examine and make adjustments as appropriate to its natural gas hedging program. DEP shall also provide monthly natural gas hedging reports to Nucor and ORS.

16. DEP shall, by rate class, account monthly to the Commission and ORS for the differences between the recovery of fuel costs through base rates and the actual fuel costs experienced by booking the difference to unbilled revenues with a corresponding deferred debit or credit.

17. DEP shall submit monthly reports to the Commission and ORS of fuel costs and scheduled and unscheduled outages of generating units with a capacity of 100 megawatts or greater.

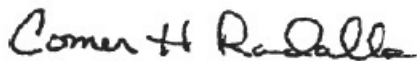
18. This Order shall remain in full force and effect until further order of the Commission.

BY ORDER OF THE COMMISSION:



Swain E. Whitfield, Chairman

ATTEST:



Comer H. Randall, Vice Chairman

RENEWABLE NET METERING RIDER RNM-~~56~~

AVAILABILITY

Available to residential and nonresidential Customers receiving concurrent service from Company, on a metered rate schedule, except as indicated under General Provisions. The renewable net energy metered (NEM) generation, which includes a solar photovoltaic; solar thermal; wind powered; hydroelectric; geothermal; tidal or wave energy; recycling resource; hydrogen fueled or combined heat and power derived from renewable resources; or biomass fueled generation source of energy, is installed on Customer's side of the delivery point, for Customer's own use, interconnected with and operated in parallel with Company's system. The generation must be located at a single premises owned, operated, leased or otherwise controlled by Customer.

Service under this Rider is closed to new participants on and after January 1, 2021, or when the statutory minimum system capacities described in S.C. Code § 58-39-130 have been reached, whichever occurs first. Customers requesting NEM service after January 1, 2021, will receive service in accordance with the NEM tariff in effect at that time. This Rider shall expire and no longer be available for NEM service on and after January 1, 2026.

GENERAL PROVISIONS

1. To qualify for service under this Rider, Customer must comply with all applicable interconnection standards and must provide, in writing, the Nameplate Capacity of Customer's installed renewable generation system. Any subsequent change to the Nameplate Capacity must be provided by Customer to Company in writing by no later than 60 days following the change.
2. To qualify for service under this Rider, a residential customer may be served on an approved residential rate schedule, but may not be served under Rider NM. The Nameplate Capacity of Customer's installed generation system and equipment must not exceed 20 kW AC.
3. To qualify for service under this Rider, a nonresidential customer may be served on an approved general service rate schedule, but may not be served on Schedules SGS-TES, TSS, TFS, LGS-RTP, LGS-CUR-TOU, CSG, CSE, GS, SFLS, SGS-TOU-CLR or Rider NM. The Nameplate Capacity of Customer's installed renewable generation system and equipment must not exceed 1,000 kW AC or 100% of Customer's contract demand which shall approximate Customer's maximum expected demand.
4. If Customer is not the owner of the premises receiving electric service from Company, Company shall have the right to require that the owner of the premises give satisfactory written approval of Customer's request for service under this Rider.
5. All environmental attributes, including but not limited to "renewable energy certificates" (RECs), "renewable energy credits" or "green tags", associated with the generation system shall be conveyed to Company until billing of a Distributed Energy Resource Program Rider DERP Charge is discontinued on all customer bills. Customer certifies that the environmental attributes have not and will not be remarketed or otherwise resold for any purpose, including another distributed energy resource standard or voluntary purchase of renewable energy certificates in South Carolina or in any other state or country for the Contract Period and any successive contract periods thereto.
6. If the electricity supplied to Customer by Company exceeds the electricity delivered to the grid by the customer-generator during a monthly billing period, the customer-generator shall be billed for the net electricity in kilowatt hours (kWh) supplied by Company plus any demand or other charges

BROWN EXHIBIT 1

Duke Energy Progress, LLC
(South Carolina)

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under the applicable rate schedule or riders. If the electricity delivered to the grid by the customer-generator exceeds the electricity in kWh supplied by the utility during a monthly billing period, the customer-generator shall be credited for the excess kWh generated during that billing period.

7. Electricity delivered to the grid by Customer's renewable generation that exceeds the electricity delivered by Company is defined as Excess Energy. When used in conjunction with a time of use schedule, the TOU periods shall be specified in the applicable schedule and any Excess Energy shall apply first with the Excess Energy generated On-Peak kWh offsetting On-peak usage and then offsetting Off-peak usage. Any excess Off-Peak kWh shall only apply against Off-peak kWh usage. Any Excess Energy not used in the current month to offset usage shall carry forward to the next billing month.
8. Excess Energy shall be used to reduce electricity delivered and billed by Company during the current or a future month, except that for the March billing period any carry-over shall be compensated as described in the RATE paragraph below. In the event Company determines that it is necessary to increase the capacity of facilities beyond those required to serve Customer's electrical requirement or to install a dedicated transformer or other equipment to protect the safety and adequacy of electric service provided to other customers, Customer shall pay the estimated cost of the required transformer or other equipment above the estimated cost which Company would otherwise have normally incurred to serve Customer's electrical requirement, in advance of receiving service under this Rider.
9. The rates set forth herein are subject to Commission Order No. 2015-194, issued in Docket No. 2014-246-E pursuant to the terms of S.C. Code § 58-40-20(F)(4). Eligibility for this rate will terminate as set forth in that Order, and otherwise as specified above. The value of NEM generation eligible for this Rider shall be computed using the methodology contained in Commission Order No. 2015-194, in Docket No. 2014-246-E, and shall be updated annually by Company. The value of NEM generation for ~~2017-2018~~ is ~~\$0.05013-05033~~ per kWh for Schedules RES, R-TOUD, and SGS and ~~\$0.05017-05025~~ for all other schedules.

RATE

All provisions of the applicable schedule and other applicable riders will apply to service supplied under this Rider, except as modified herein. For any bill month during which the Energy Charges are a net credit, the respective Energy Charges for the month shall be zero. Credits shall not offset the Basic Facilities Charge or the Demand Charge (if applicable). In addition to all charges in the applicable rate schedule for Customer's net electrical usage, the following credit may be applicable annually:

Annual Credit for Excess Generation –

If Customer has Excess Energy after offsetting usage as of the date of the March billing, Company shall pay Customer for the amount of the accumulated Excess Energy times a rate of \$0.04290 per kWh, after which the amount of Excess Energy shall be set to zero.

MINIMUM BILL

The monthly minimum bill for customers receiving service under this Rider shall be no less than Basic Facilities Charge from the applicable rate schedule and riders plus, if applicable, any of the following Charges: the Demand Charge, the Off-peak Excess Demand Charge, and the Extra Facilities Charge.

BROWN EXHIBIT 1

Duke Energy Progress, LLC
(South Carolina)

SC Rider RNM-~~56~~
Supersedes Rider RNM-~~45~~

METERING REQUIREMENTS

~~Customer must provide access and designate a location on the load side of the billing meter for Company to furnish, install, own and maintain metering with 15 minute interval capability to record 100% of Customer's generator output. At Company's sole option, the generator meter requirement may be waived for customers served under a net metering rider on or before December 31, 2015.~~ Company will ~~also~~ furnish, install, own and maintain a billing meter to measure the kilowatt demand delivered by Company to Customer, and to measure the net kWh purchased by Customer or delivered to Company. For renewable generation capacity of 20 kW AC or less, the billing meter will be a single, bi-directional meter which records independently the net flow of electricity in each direction through the meter, unless Customer's overall electrical requirement merits a different meter. For larger renewable generation capacities, Company may elect to require two meters with 15-minute interval capabilities to separately record Customer's electrical consumption and the total generator output, which will be electronically netted for billing. Customer grants Company the right to install, operate, and monitor special equipment to measure Customer's generating system output, or any part thereof, and to obtain any other data necessary to determine the operating characteristics and effects of the installation. All metering shall be at a location that is readily accessible by Company.

SAFETY, INTERCONNECTION AND INSPECTION REQUIREMENTS

This Rider is only applicable for installed renewable generation systems and equipment that complies with and meets all safety, performance, interconnection, and reliability standards established by the Commission, the National Electric Code, the National Electrical Safety Code, the Institute of Electrical and Electronic Engineers, Underwriter's Laboratories, the Federal Energy Regulatory Commission and any local governing authorities. Customer must comply with all liability insurance requirements of the Interconnection Standard.

POWER FACTOR

Customer's renewable generation must be operated to maintain a 100% power factor, unless otherwise specified by Company. When the average monthly power factor of the power supplied by Customer to Company is other than 100%, the Low Power Factor Adjustment stated in Company's Service Regulations may be applicable. Company reserves the right to install facilities necessary for the measurement of power factor. Company will not install such equipment, nor charge a Low Power Factor Adjustment if the renewable generation system is less than 20 kW AC and uses an inverter.

CONTRACT PERIOD

Customer shall enter into a contract for service under this Rider for a minimum original term of one (1) year, and shall automatically renew thereafter, except that either party may terminate the contract after one year by giving at least sixty (60) days prior notice of such termination in writing.

Company reserves the right to terminate Customer's contract under this Rider at any time upon written notice to Customer in the event that Customer violates any of the terms or conditions of this Rider, or operates the renewable generation system and equipment in a manner which is detrimental to Company or any of its customers. In the event of early termination of a contract under this Rider, Customer will be required to pay Company for the costs due to such early termination, in accordance with Company's South Carolina Service Regulations.